

WHAT IS CLAIMED IS:

1. A method for allocating a first data set to a first storage volume of a storage system, wherein said storage system includes a plurality of storage resources that each contain one or more storage volumes, said method comprising:

(a) identifying at least one second data set from which said first data set is to be separated;

(b) identifying any of said plurality of storage resources and any volume thereof that contains said second data set; and

(c) forming an eligible volume list for selection of said first storage resource according to a policy such that any storage volume identified by step (b) is excluded from said list, whereby a failure in a storage resource that contains said first storage volume or any storage resource identified by step (b) has a minimal impact on the other thereof.

2. The method of claim 1, wherein the remainder of said storage volumes are ordered according to said policy to prefer those that meet a preferred separation level ahead of those that do not meet said preferred separation level.

3. The method of claim 2, wherein said plurality of storage resources include first and second storage resources, said first storage resource is a subsystem of said second storage resource and said preference level includes at least said second storage resource, wherein step (b) identifies said first storage resource as containing said second data set, and wherein step (c) forms said eligible volume list by omitting the storage volumes of said first storage resource from said list and placing any other storage volumes contained in said second storage

resource behind any storage volumes of others of said plurality of storage resources in said eligible volume list.

4. The method of claim 1, wherein step (c) forms said eligible volume list by identifying a group of said plurality of storage resources that are available for allocation to said first data set and by eliminating from said group any of said storage resources identified by step (b).

5. The method of claim 1, further comprising (d) selecting said first storage volume from said eligible volume list.

6. A computer that allocates a first data set to a first storage volume of a storage system, wherein said storage system includes a plurality of storage resources that each contain one or more storage volumes, said computer comprising:

first means for identifying at least one second data set from which said first data set is to be separated;

second means for identifying any of said plurality of storage resources and any volume thereof that contains said second data set; and

third means for forming an eligible volume list for selection of said first storage resource according to a policy such that any storage volume identified by said second means is excluded from said list, whereby a failure in either a storage resource that contains said first storage volume or any storage resource identified by said second means has a minimal impact on the other thereof.

7. A memory media for causing a computer to allocate a first data set to a first storage volume of a storage system, wherein said storage system includes a

plurality of storage resources that each contain one or more storage volumes, said memory media comprising:

first means for controlling said computer to perform a first operation of identifying at least one second data set from which said first data set is to be separated;

second means for controlling said computer to perform a second operation of identifying any of said plurality of storage resources and any volume thereof that contains said second data set; and

third means for controlling said computer to perform a third operation of forming an eligible volume list for selection of said first storage resource according to a policy such that any storage volume identified by said second operation is excluded from said list, whereby a failure in either a storage resource that contains said first storage volume or any storage resource identified by said second operation has a minimal impact on the other thereof.